



## HOLISTIC HEALTH POTENTIAL OF INDIAN PENNYWORT (*CENTELLA ASIATICA* (L.) URBAN): A REVIEW

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### ABSTRACT

This paper deals with focussing on multitherapeutic effects of Indian Pennywort in curing number of ailments in different healing systems. Aim of this study was to review the efficiency of plant in curing various ailments and disorders such as Chronic fever, Bone T.B., Tuberculosis, Blood purifier, Detoxificant, Urinary tract infection, Leprosy, Dermatitis, Pruritis, Hair fall, greying hairs, Rheumatic affections, Cardio tonic, Cardiac spasm, Hypertension, Asthma, Insomnia, Aging retardant, Syphilis, Epilepsy, Female hormonal disorders and Alzheimers disease. It is also used as general tonic to enhance vigour and vitality of the body. Ethnomedicinal uses of the plants help in curing various disorder/disease in human. Purity, strength and therapeutic index of the GACP plants is higher. Indian Pennywort (*Centella asiatica* (L.) Urban) is wonder herb and considered as one of the very important divine plant of the world. Distributed all over India but specially concentrated from Haridwar up to more than 600 m in himalayan tracts.

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## INTRODUCTION

The holistic human health has been in the centre of all scientific efforts. The efforts include the conservation and improvement of human health (Physical, Mental and Spiritual). Besides healthy environment and positivity, plants have played a keyrole in such efforts. Among these plants, medicinal herbs have emerged as the strongest biotools for the purpose. There are more than 390,900 plant species known and botanically identified. However, the reports warns that 21% of plants are at risk of extinction, due to threats from climate change, habitat loss, disease, invasive species and over exploitation. Royal Botanical Garden stated that about 28,187 species of plant have been marked as potential herbs with human health point of view. But only16% (4,478) of the species used in plant based medicines are cited in medicinal regulating publications. Two thousand plus species are directly or indirectly in use for the human health and also for the health of domestic animals in various system of healing including Allopathy, Homeopathy, Unani-Tibbi and Ayurveda-Siddha.

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India is emerging country with wide scope for growth in various sectors. We need to explore our potential of rich flora so that we may overcome our problems in sustainable manner. Medicinal plants offer alternative remedies for various ailments in safe and efficient way. These have enough potential to cure some incurable disease also. Indian Pennywort (*Centella asiatica* (L.) Urban) is wonder herb and considered as one of the very important divine plant of the world. Distributed all over India but specially concentrated from Haridwar up to more than 600 meters in himalayan tracts and common on banks of river ganga and its distributaries. In north-eastern hills plant is found up to 2500 meters. The plant is reported to occur in countries like India, Sri Lanka, China, Indonesia, Pakistan, China, Japan, Malaysia, Tropical America, South Africa and Pacific islands. The herb is used in modern as well as traditional systems of medicine. The plant is frequently used for ethnomedicinal purpose by rural and tribal people. According to WHO, people of developing countries depends up on the herbal medicines for primary healthcare. These are sources for potential molecules for new drug design. The global market for the medicinal plants and herbal medicine is estimated to be worth US\$900 billion a year and the market for Indian systems (Ayurveda, Unani and Siddha)

of medicine is about Rs. 5000 crores per year. Therapeutic quality, purity and strength of the plant secondary metabolite depends up on the good agriculture cultivation practices (GACP). The plant is found as a weed in crop fields and other waste places throughout India.

#### Details of the Plant:

**Botanical Name:** *Centella asiatica* (L.) Urban

**Hindi Name:** Mandukparni

**Family:** Apiaceae

**Geographical Source:** The plant is native to Southeast Asia. It is a tropical climate plant found in India, Sri Lanka, China, Indonesia, Pakistan, China, Japan, Malaysia, Tropical America, South Africa and Pacific islands. It is commonly found as a weed in crop fields and other waste places throughout India upto more than 600 m altitude. In north-eastern hills it is found up to 2500 m.

**Morphology:** A prostrate, faintly aromatic, stoloniferous perennial herb. The plant grows horizontally through its green to red stolons. The leaves are in yellowish –green color, thin, alternate with long petioles, and quite characteristic reniform, orbicular, or oblong-elliptic shapes.

**Plant part used:** Whole plant

**Chemical constituents:** The major chemical compound found in the plant is triterpene saponosides. The major ones are known as asiatic acid, madecassic acid, asiaticoside, madecassoside, and madasiatic acid, betulinic acid, thankunic acid and isothankunic acid. Moreover, there are some other triterpenes such as brahmic acid, centellin, asiaticin and terminolic acid.

**Purity:** Foreign matter -Not more than 2%

Total Ash-	Not more than 17%
Acid-insoluble Ash -	Not more than 5%
Alcohol –soluble extractive-	Not less than 9%

**Table 1. List of Ayurvedic Formulations and their mode of administration**

Sr.No.	Formulation	Mode of Administration & Uses
1.	Mandukparni Kalk	Taken with milk; memory enhancer and Aging retardant
2.	Mandukparni Ras	External application on skin; cure fungal affections and dermatitis
3.	Mandukparni Ghrita	Taken for one month with milk; invigorating and longevity of life
4.	Mandukparni Malham	External application; skin disorders
5.	Mandukparni Sharbat	Taken orally; equilibrate body heat
6.	Mandukparni Divyarishta	Taken orally; Tonic, memory enhancer, blood purifier, effective in leprosy & syphilis, skin disease, bone T.B, Tuberculosis and chronic fever
7.	Mandukparni Galactogoge	Taken orally; It is a good rasayan , increases Hb % of blood, Improve the lactation & vigour of the body along with Vayasthapan, improves medha ( memory), nervine tonic, cardiogenic, blood purifier & detoxificant
8.	Mandukparni Good night tea	Taken orally before bed; It is a good sedative, cures insomnia
9.	Mandukparni Geriatric tonic	Taken orally ; beneficial for joint pain, intellect promoting tonic, beneficial for digestive disorders, liver ailments, mild hypertension, , asthma, urinary problems, rheumatic affections & neurological affection
10.	Geriforte	Taken orally; a herbomineral drug , Anti-stress
11.	Intellan	Taken orally; a neuroenergiser
12.	Mentat	Taken orally; cures behavioural problems of children, memory improver and learning performance enhancer

#### Human system wise usage table is given below

Body System	Clinical Symptoms
Mind	Weakness of memory, desire for solitude, gloomy
Head	Vertigo, neuralgic pain
Stomach	Anorexia, then strong appetite, aversion to tobacco smoking
Rectum	Burning and itching in anus, weight in rectum
Urinary system	Frequent desire to urinate
Male sexual system	Impotency, indifference to intercourse
Female sexual system	Leucorrhoea, heaviness in uterus, vulva-vagina and cervix are red
Respiratory system	Dryness in larynx, weak voice, talking makes fatigue, difficult to expectorate, shortness of breathe
Heart & pulse	Cardiac spasm, constriction of heart, irregular beating of heart, pulse strong and full but regular
Skin	Spots with raised scaly edges, eruptions on neck-back & chest, itching at the tip of nose, syphilitic affection, stomatitis
Fever	Shivering in afternoon, Hands and feet cold; ameliorated by rubbing

**Table 2. Organ wise clinical symptoms**

Organs	Clinical Symptoms
Eyes	Look unsteady, pricking in eyes, vision dim
Ears	Pain in left internal meatus, auditorious left ear, confused noise in left
Nose	Swelling of nose, coryza with thin nasal discharge
Face	Lupus, coppery eruption, pimples, acne on face
Mouth	Redness of velum palate, hyperanaemia of buccal mucosal membrane, white spot on tongue
Throat	Red tonsils

#### Some important Unani formulations are given as under

Sr.No.	Formulation	Mode of Administration & Uses
1.	Brahmi Taila	External application on scalp; memory loss, hair fall, premature greying, stress disorder & itchy scalp
2.	Brahmi Majun	Internal application; Mental debility, strengthens brain & improves memory
3.	Brahmi Capsule	Internal application; Alzheimers disease, amnesia, anxiety, hyperactivity, lack of concentration, schizophrenia and speech disorder
4.	Brahmi Rogan	External application; It relieves from khuski (dryness) of scalp
5.	Brahmi Malham	External application; skin itching, pruritis and skin eruptions

Water-soluble extractive- Not less than 20%

A brief review of uses of *Centella asiatica* (L.) Urban as raw material for preparing medicines useful in different system of healing is given below-

- Ayurvedic System
- Homoeopathic System
- Unani System

### Ayurvedic System

This system of healing is now has been recognized as the most comprehensive system because of its holistic approach (as against individual organ system in modern medicine). This system is based on imbalance of Vaata, Pitta and Kapha (not cough). This considers the remediative approach in combination with environmental factors and their interactions. *Centella asiatica* (L.) Urban is a prominent medicine in this system. Following preparations are important medicines primarily based on Panchang (whole plant) as important ingredient.

### Homoeopathic System

In this system; the plant and its part are used in different ways like Panchang ( whole plant) or specific plant part. The whole plant is generally used for preparing mother tincture. Mother tincture of *Centella asiatica* (L.) Urban is the most common preparation used for human health ailments in different potencies. Preferable potencies are 3X and 6X. Mother tincture is used in human ailments like Acne rosacea, Elephantiasis arabum, Puritas vaginae, favus, gangrene after amputation, gonorrhoea, gout, ichthyosis, leprosy, leucorrhoea, liver, skin, syphilis and follicular inflammation of uterus. According to Boericke (1927); the *Centella asiatica* (L.) Urban is excellent remedy in jaundice, leprosy, skin disease, syphilis, gonorrhoea, dropsy, leucorrhoea, elephantiasis, diuretic, nervine debility and seminal weakness.

In addition to Boericke; CCRH (2011) published organ wise clinical symptom which are given in brief:

**Relation with other homoeopathic medicine:** Elaeis, Taraktogenos oil, Hydrastis

### Unani System

The name Unani has its base in the Nation Unan (Greek). Unani system of medicines is based on four basic humours: Phlegm (Balgham), Blood (Dam), Yellow bile (Safra) and Black bile ( Sauda). Management of any disease depends up on the diagnosis of disease. In the diagnosis; clinical features i.e. signs, symptoms, laboratory features and mizaj (temperament) are important. Any cause and or factor is countered by Quwwat-e-Mudabbira-e-Badan (the power of body responsible to maintain health/ comparable with jeevani shakti of Ayurveda or vital force of Allopathy). The failure of the power to counter the factor/ disease causing factor leads to derangement of the normal equilibrium of akhlat (humors) of body which constitute the tissues and organs. The abnormal humours leads to pathological changes in tissues anatomically and physiologically. These imbalances are diagnosed by experienced Hakims by the Nabaja. Majority of Unani principles of diagnosis and disease management are similar to Ayurveda.

Unani medicines prepared from plants are in use in developed as well as developing countries. Many reputed pharmaceutical companies are involved in medicine preparation. Important preparations are Majun, Sharbats, Khamiras, Arks, Kushtas, Capsules, Tablets, Taila, Malham, Kursha, Jwaris, Laboob, Rogan, Habbe etc. More than 100 plants are used alone as ingredients or in suitable combinations with other ingredients for preparing unani medicines. *Centella asiatica* (L.) Urban is a prominent medicine in Unani system. General remediative for nervous system, slightly sedative, tonic for heart, beneficial for digestive stimulant, diuretic, beneficial for larynx and useful in hiccup, asthma, bronchitis, urinary tract problems.

### Summary and Conclusion

India is a developing country. The holistic human health has been in the centre of all scientific efforts. The efforts include the conservation and improvement of human health (Physical, Mental and Spiritual). Indian Pennywort (*Centella asiatica* (L.) Urban) has great potential to cure various disorder and disease in various system of healing such as Ayurvedic system, Homoeopathic system and Unani system. It helps in curing various ailments and disorders such as Chronic fever, Bone T.B., Tuberculosis, Urinary tract infection, Leprosy, Dermatitis, Pruritis, Hair fall, greying hairs, Rheumatic affections, Cardio tonic, Cardiac spasm, Hypertension, Asthma, Insomnia, Aging retardant, Syphilis, Epilepsy, Female hormonal disorders and Alzheimers disease. It is also used as general tonic to enhance vigour and vitality of the body. It is a native plant of Southeast Asia. It is commonly found in tropical climate in various countries like India, Sri Lanka, China, Indonesia, Pakistan, China, Japan, Malaysia, Tropical America, South Africa and Pacific islands. It is reported as a weed in crop fields and other waste places throughout India up to more than 600 m altitude and in north-eastern hills it is found up to 2500 m. According to WHO, people of developing countries depends up on the herbal medicines for primary healthcare. These are sources for potential molecules for new drug design. The global market for the medicinal plants and herbal medicine is estimated to be worth US\$900 billion a year and the market for Indian systems of medicine is about Rs. 5000 crores per year.

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